

WHAT IS CLAIMED IS:

1. A system for identifying and analyzing potential transactions for the sale and purchase of electric power between one or more potential energy service providers and one or more potential customers for said power, said system comprising:
  - (a) data communication means among said potential energy service providers and said potential customers;
  - (b) means for analyzing the usage of electric power by one or more of said customers; and
  - (c) means for determining the effect on one or more of said potential energy service providers of combining one or more potential customer usages of electric power (loads) with the electric power supply obligations (loads) of one or more of said energy service providers.
2. A system for arranging transactions for the sale and purchase of electric power between one or more potential energy service providers and one or more potential customers for said power, said system comprising:
  - (a) data communication means among said potential energy service providers and said potential customers;
  - (b) means for analyzing the usage of electric power by one or more of said customers;
  - (c) means for determining the effect on one or more of said potential energy service providers of combining one or more potential customer usages of electric power

(loads) with the electric power supply obligations (loads) of one or more of said energy service providers; and

(d) means for arranging one or more transactions between one or more of said providers and one or more of said customers.

3. A system for identifying and analyzing historical transactions for the sale and purchase of electric power between one or more energy service providers and one or more customers for said power, said system comprising:

(a) data communications means for the users of the system;

(b) means for analyzing the customer loads involved in the historical transactions;  
and

(c) means for determining the effect on the energy service provider involved in a historical transaction of combining the electric load of the customer involved in that transaction with electric power supply obligations (load) of the energy service provider involved in that transaction.

4. A system for identifying and analyzing potential transactions involving the shifting of electric power supply obligations between energy service providers, said system comprising:

(a) data communication means between two or more energy service providers;

(b) means for analyzing said supply obligations of said energy service providers; and

- (c) means for determining the effect on said energy service providers of shifting supply obligations between them.
- 5. A system for arranging transactions involving the shifting of electric power supply obligations between energy service providers, said system comprising:
  - (a) data communication means between two or more energy service providers;
  - (b) means for analyzing said supply obligations of said energy service providers;
  - (c) means for determining the effect on said electric service providers of shifting supply obligations between them; and
  - (d) means for arranging one or more transactions involving the shifting of electric power supply obligations between two or more of said energy service providers.
- 6. A system for identifying and analyzing historical transactions involving the shifting of electric power supply obligations between energy service providers, said system comprising:
  - (a) data communications means for users of the system;
  - (b) means for analyzing said supply obligations of the energy service providers involved in the historical transactions; and
  - (c) means for determining the effect of the historical transactions involving the shifting of said supply obligations on the supply obligations of the energy service providers involved in the historical transactions.

7. A system for identifying and analyzing potential transactions for the sale and purchase of electric power and/or the shifting of electric power supply obligations between or among (i) one or more potential energy service providers, (ii) one or more energy service providers to which or from which load may be shifted and (iii) one or more potential customers, said system comprising:
- (a) data communications means among said potential energy service providers, said other energy service providers to which or from which load may be shifted, and potential customers;
  - (b) means for analyzing the electric power supply obligations of one or more of said energy service providers and of one or more of said other energy service providers to which or from which load may be shifted and for analyzing the usage of electric power by one or more of said customers; and
  - (c) means for determining the effect on one or more of said energy service providers and on one or more of said other energy service providers to which or from which load may be shifted of shifting supply obligations between or among said energy service providers and of combining one or more potential customer usages of electric power (loads) with the electric power supply obligations of one or more of said energy service providers.
8. A system for arranging transactions for the sale and purchase of electric power and/or the shifting of electric power supply obligations between or among (i) one or more potential energy service providers, (ii) one or more energy service providers to which or from

which a load may be shifted and (iii) one or more potential customers, said system comprising:

- (a) data communications means among said potential energy service providers, said other energy service providers to which or from which load may be shifted, and potential customers;
- (b) means for analyzing the electric power supply obligations of one or more of said energy service providers and of one or more of said other energy service providers to which or from which load may be shifted and for analyzing the usage of electric power by one or more of said customers;
- (c) means for determining the effect on one or more of said energy service providers and on one or more of said other energy service providers to which or from which load may be shifted of shifting supply obligations between or among said energy service providers and of combining one or more potential customer usages of electric power (loads) with the electric power supply obligations of one or more of said energy service providers;
- (d) means for arranging load shifting transactions between one or more of said energy service providers and one or more of said other energy service providers to which or from which load may be shifted; and
- (e) means for arranging a transaction involving the purchase and sale of electric power between one or more of said energy service providers and one or more of said customers.

9. A system for identifying and analyzing historical transactions involving the shifting of electric power supply obligations between or among energy service providers and/or the sale and purchase of electric power between or among one or more energy service providers and one or more customers for said power, said system comprising:
- (a) data communication means for users of the system;
  - (b) means for analyzing the supply obligations of the energy service providers involved in the historical transactions;
  - (c) means for analyzing the customer loads involved in the historical transactions;
  - (d) means for determining the effect of the historical transaction involving the shifting of supply obligations on the supply obligations of the energy providers involved in the historical transactions; and
  - (e) means for determining the effect on the energy service providers involved in the historical transaction involving the combining of the electric load of the customer involved in that transaction with the electric power supply obligations of the energy service provider involved in that historical transaction.
10. A system for identifying and analyzing potential transactions for the aggregation of the electric loads of one or more customers and/or one or more aggregators, said system comprising:
- (a) data communications means among said customers and/or said aggregators;

- (b) means for analyzing the usage of electric power by one or more of said customers and/or one or more of said aggregators; and
  - (c) means for determining the effect on one or more of said customers and/or one or more of said aggregators of combining two or more of the loads of said customers and/or said aggregators.
11. A system for arranging transactions for the aggregation of the electric loads of one or more customers and/or one or more aggregators, said system comprising:
- (a) data communications means among said customers and/or said aggregators;
  - (b) means for analyzing the usage of electric power by one or more of said customers and/or one or more of said aggregators;
  - (c) means for determining the effect on one or more of said customers and/or one or more of said aggregators of combining two or more of the loads of said customers and/or said aggregators; and
  - (d) means for arranging one or more aggregation transactions between or among one or more of said customers and/or one or more of said aggregators.
12. The system of claim 1 further comprising means for utilizing discrete criteria and impact criteria to identify and analyze said potential transactions.
13. The system of claim 1 further comprising means to operate in either autonomous or custom load search mode.

14. The system of claim 4 further comprising means for utilizing discrete criteria and impact criteria to identify and analyze said potential transactions.
15. The system of claim 4 further comprising means to operate in either autonomous or custom load search mode.
16. The system of claim 7 further comprising means for utilizing discrete criteria and impact criteria to identify and analyze said potential transactions.
17. The system of claim 7 further comprising means to operate in either autonomous or custom load search mode.
18. The system of claim 3 further comprising means for utilizing discrete criteria and impact criteria to identify and analyze said historical transactions.
19. The system of claim 3 further comprising means to operate in either autonomous or custom price search mode.
20. The system of claim 6 further comprising means for utilizing discrete criteria and impact criteria to identify and analyze said historical transactions.
21. The system of claim 6 further comprising means to operate in either autonomous or custom price search mode.
22. The system of alarm 9 further comprising means for utilizing discrete criteria and impact criteria to identify and analyze said historical transactions.



23. The system of claim 9 further comprising means to operate on either autonomous or custom price search mode.
24. The system of claim 10 further comprising means for utilizing discrete criteria and impact criteria to identify and analyze said potential transactions.
25. The system of claim 10 further comprising means to operate on either autonomous or custom load search mode.
26. A retail electric power exchange/energy service provider load optimization exchange together comprising an exchange node operatively connected to energy service providers and potential customers for electric power, said exchange node comprising: a retail load search engine, an optimization load search engine, a retail trading engine, an optimization trading engine, and an exchange database operatively associated with said search and trading engines.
27. The system of claim 26, with the exchange node further comprising a retail price search engine and an optimization price search engine.
28. A network of two or more retail electric power exchanges/energy service provider optimization exchanges comprising two or more exchange modes operatively connected to one another and to energy service providers and potential customers for electric power, each of said exchange modes comprising: a retail load search engine, an optimization load search engine, a retail trading engine, an optimization trading engine, and an exchange database operatively associated with said load search and trading engines.

29. The system of claim 28 with each exchange node further comprising a retail price search engine and an optimization price search engine.
30. The system of claim 26 wherein the exchange node functionality is independent of any particular hardware configuration.
31. The system of claim 26 including means to provide users thereof with information conveying the impact of proposed or actual transactions for the trading of electric power at retail upon an ESP load and, in transactions involving divided loads, also the impact of said transactions upon the residual load of the customer or aggregator.
32. The system of claim 26 including means to provide users thereof with information conveying the impact of aggregation transactions involving whole loads or divided loads upon customers or aggregators.
33. The system of claim 26 including means to carry out customer instructions including associated load instructions, customer autonomous search instructions, load aggregation instructions, division trading instructions, long position instructions, aggregation transaction instructions, and customer ID instructions.
34. The system of claim 26 where the means for the identification and analysis of one or more customer loads or aggregate loads utilize discrete criteria or impact criteria as the basis for searching for appropriate customer loads or aggregate loads.
35. The system of claim 26 where the means for the identification of one or more electric service provider loads by a customer utilize the discrete criteria or impact criteria used by

- an ESP applied to that customer's load to determine which ESP or ESPs have used discrete criteria and/or impact criteria that would be met by that customer load.
36. The system of claim 26 where that system can identify and analyze whole loads, hypothetical loads, or divided loads.
  37. The system of claim 26, where the discrete or impact criteria are applied to whole loads, hypothetical loads, or divided loads.
  38. The system of claim 26 including means, when divided loads of customers or aggregators are searched, to apply specified impact criteria to the load of the exchange user making the search and to the portion of the divided load to be left with the customer or aggregator after the portion of the divided load that met the search criteria specified by the exchange user making the search is eliminated from the load of that customer or aggregator.
  39. The system of claim 26 including means to facilitate the functional division, practical division, or unit division of customer loads or aggregate loads.
  40. The system of claim 26 including means to facilitate load division by incorporating the instructions of customers or aggregators with respect to how to divide their respective loads and make information concerning such customer-defined or aggregator-defined segments available to users of the system.
  41. The system of claim 26 including means to facilitate load division by offering, at the request of the customer or aggregator, suggestions for the division of the customer load an aggregate load on a functional, practical, or unit basis.

42. The system of claim 26 including means to facilitate load division by enabling electric service providers, aggregators, and customers to suggest to customers and aggregators how their loads might be segmented using functional division, practical division, or unit division.
43. The system of claim 26 including means to execute transactions involving the trading of electric power at retail where trading involves whole loads or divided loads.
44. The system of claim 26 including means to execute transactions involving long position trading.
45. The system of claim 26 including means to execute transactions involving the trading of electric power at retail with customers or aggregators that consume energy at one site or a plurality of sites.
46. The system of claim 26 including means to address the ESP matching problem, the customer load efficiency problem, and the multiple site problem.
47. The system of claim 26 including means for calling to the attention of energy service providers those customer loads which, if added to the energy service provider's load, would increase the efficiency thereof.
48. The system of claim 26 including means for enabling customers or aggregators to offer hypothetical loads for consideration by energy service providers.
49. The system of claim 26 including means for enabling an energy service provider to identify the impact upon that energy service provider's load and upon other energy

- service providers' loads of load shifting between that energy service provider and other energy service providers.
50. The system of claim 26 including means for enabling the division of energy service provider loads through functional division, practical division, or unit division.
  51. The system of claim 26 including means for executing transactions between or among energy service providers involving of load-shifting.
  52. The system of claim 26 including means for searching for potential complimentary loads based upon discrete and impact criteria.
  53. The system of claim 26 including means for searching for customer loads or aggregate loads that meet exchange user-specified or exchange user-designed discrete or impact criteria.
  54. The system of claim 26 including means for searching for ESP loads that meet exchange user-specified or exchange user-designed discrete or impact criteria.
  55. The system of claim 26 including means to execute aggregation transactions between or among customers and/or aggregators.
  56. The system of claim 26 including means to carry out energy service provider instructions, including ESP autonomous search instructions, impact disclosure instructions, optimization contract instructions, optimization trading instructions, and ESP ID instructions.
  57. The system of claim 27 wherein the exchange node functionality is independent of any particular hardware configuration.

58. The system of claim 27 where the retail price search engine and the optimization price search engine make use of trade history tables.
59. The system of claim 27 where the retail price search engine and the optimization price search engine make use of discrete criteria and impact criteria.
60. The system of claim 27 including means to provide users thereof with information conveying the impact of proposed or actual transactions for the trading of electric power at retail upon an ESP load and, in transactions involving divided loads, also the impact of said transactions upon the residual load of the customer or aggregator.
61. The system of claim 27 including means to provide users thereof with information conveying the impact of aggregation transactions involving whole loads or divided loads upon customers or aggregators.
62. The system of claim 27 including means to carry out customer instructions including associated load instructions, customer autonomous search instructions, load aggregation instructions, division trading instructions, long position instructions, aggregation transaction instructions, and customer ID instructions.
63. The system of claim 27 where the means for the identification and analysis of one or more customer loads or aggregate loads utilize discrete criteria or impact criteria as the basis for searching for appropriate customer loads or aggregate loads.
64. The system of claim 27 where the means for the identification of one or more electric service provider loads by a customer utilize the discrete criteria or impact criteria used by

- an ESP applied to that customer's load to determine which ESP or ESPs have used discrete criteria and/or impact criteria that would be met by that customer load.
65. The system of claim 27 where that system can identify and analyze whole loads, hypothetical loads, or divided loads.
  66. The system of claim 27, where the discrete or impact criteria are applied to whole loads, hypothetical loads, or divided loads.
  67. The system of claim 27 where that system can identify and analyze exchange trades involving whole loads, hypothetical loads, or divided loads.
  68. The system of claim 27, where the discrete or impact criteria are applied to exchange trades involving whole loads, hypothetical loads, or divided loads.
  69. The system of claim 27 including means, when divided loads of customers or aggregators are searched, to apply specified impact criteria to the load of the exchange user making the search and to the portion of the divided load to be left with the customer or aggregator after the portion of the divided load that met the search criteria specified by the exchange user making the search is eliminated from the load of that customer or aggregator.
  70. The system of claim 27 including means to facilitate the functional division, practical division, or unit division of customer loads or aggregate loads.
  71. The system of claim 27 including means to facilitate load division by incorporating the instructions of customers or aggregators with respect to how to divide their respective

loads and make information concerning such customer-defined or aggregator-defined segments available to users of the system.

72. The system of claim 27 including means to facilitate load division by offering, at the request of the customer or aggregator, suggestions for the division of the customer load an aggregate load on a functional, practical, or unit basis.
73. The system of claim 27 including means to facilitate load division by enabling electric service providers, aggregators, and customers to suggest to customers and aggregators how their loads might be segmented using functional division, practical division, or unit division.
74. The system of claim 27 including means to execute transactions involving the trading of electric power at retail where trading involves whole loads or divided loads.
75. The system of claim 27 including means to execute transactions involving long position trading.
76. The system of claim 27 including means to execute transactions involving the trading of electric power at retail with customers or aggregators that consume energy at one site or a plurality of sites.
77. The system of claim 27 including means to address the ESP matching problem, the customer load efficiency problem, the multiple site problem, and the price information problem.



78. The system of claim 27 including means for calling to the attention of energy service providers those customer loads which, if added to the energy service provider's load, would increase the efficiency thereof.
79. The system of claim 27 including means for enabling customers or aggregators to offer hypothetical loads for consideration by energy service providers.
80. The system of claim 27 including means for enabling potential parties to retail trades to search for information concerning exchange trades made by others based upon discrete or impact criteria.
81. The system of claim 27 including means for enabling an energy service provider to identify the impact upon that energy service provider's load and upon other energy service providers' loads of load shifting between that energy service provider and other energy service providers.
82. The system of claim 27 including means for enabling the division of energy service provider loads through functional division, practical division, or unit division.
83. The system of claim 27 including means for executing transactions between or among energy service providers involving load-shifting.
84. The system of claim 27 including means for enabling potential parties to optimization trades to search for information concerning optimization trades made by others based upon discrete or impact criteria.

85. The system of claim 27 including means for searching for potential complimentary loads based upon discrete and impact criteria.
86. The system of claim 27 including means for searching for customer loads or aggregate loads that meet exchange user-specified or exchange user-designed discrete or impact criteria.
87. The system of claim 27 including means for searching ESP loads that meet exchange user-specified or exchange user-designed discrete or impact criteria.
88. The system of claim 27 including means for enabling exchange users to search for information relating to retail trades, including price and trade terms.
89. The system of claim 27 including means for enabling electric service providers to search for information relating to optimization trades, including the price and trade terms of said transactions.
90. The system of claim 27 including means to execute aggregation transactions between or among customers and/or aggregators.
91. The system of claim 27 including means to carry out energy service provider instructions, including ESP autonomous search instructions, impact disclosure instructions, optimization contract instructions, optimization trading instructions, and ESP ID instructions.
92. The system of claim 28 wherein the exchange node functionality is independent of any particular hardware configuration.

93. The system of claim 28 wherein the exchange network functionality is independent of the network architecture employed.
94. The system of claim 28 wherein the exchange network functionality is independent of the communications technology used to connect exchange nodes.
95. The system of claim 28 including means to provide users thereof with information conveying the impact of proposed or actual transactions for the trading of electric power at retail upon an ESP load and, in transactions involving divided loads, also the impact of said transactions upon the residual load of the customer or aggregator.
96. The system of claim 28 including means to provide users thereof with information conveying the impact of aggregation transactions involving whole loads or divided loads and local loads or network loads upon customers or aggregators.
97. The system of claim 28 including means to carry out customer instructions including associated load instructions, customer autonomous search instructions, load aggregation instructions, division trading instructions, long position instructions, aggregation transaction instructions, and customer ID instructions.
98. The system of claim 28 where the means for the identification and analysis of one or more customer loads or aggregate loads utilize discrete criteria or impact criteria as the basis for searching for appropriate customer loads or aggregate loads.
99. The system of claim 28 where the means for the identification of one or more electric service provider loads by a customer utilize the discrete criteria or impact criteria used by

an ESP applied to that customer's load to determine which ESP or ESPs have used discrete criteria and/or impact criteria that would be met by that customer load.

100. The system of claim 28 where that system can identify and analyze whole loads, hypothetical loads, or divided loads.
101. The system of claim 28, where the discrete or impact criteria are applied to whole loads, hypothetical loads, or divided loads.
102. The system of claim 28 where the system can identify and analyze local loads or network loads.
103. The system of claim 28 where the discrete or impact criteria are applied to local loads or network loads.
104. The system of claim 28 including means, when divided loads of customers or aggregators are searched, to apply specified impact criteria to the load of the exchange user making the search and to the portion of the divided load to be left with the customer or aggregator after the portion of the divided load that met the search criteria specified by the exchange user making the search is eliminated from the load of that customer or aggregator.
105. The system of claim 28 including means to facilitate the functional division, practical division or unit division of customer loads or aggregate loads.
106. The system of claim 28 including means to facilitate load division by incorporating the instructions of customers or aggregators with respect to how to divide their respective

loads and make information concerning such customer-defined or aggregator-defined segments available to users of the system.

107. The system of claim 28 including means to facilitate load division by offering, at the request of the customer or aggregator, suggestions for the division of the customer load an aggregate load on a functional, practical, or unit basis.
108. The system of claim 28 including means to facilitate load division by enabling electric service providers, aggregators, and customers to suggest to customers and aggregators how their loads might be segmented using functional division, practical division, or unit division.
109. The system of claim 28 including means to execute transactions involving the trading of electric power at retail where trading involves whole loads or divided loads and local loads or network loads.
110. The system of claim 28 including means to execute transactions involving long position trading.
111. The system of claim 28 including means to execute transactions involving the trading of electric power at retail with customers or aggregators that consume energy at one site or a plurality of sites.
112. The system of claim 28 including means to address the ESP matching problem, the customer load efficiency problem, and the multiple site problem.

113. The system of claim 28 including means for calling to the attention of energy service providers those customer loads which, if added to the energy service provider's load, would increase the efficiency thereof.
114. The system of claim 28 including means for enabling customers or aggregators to offer hypothetical loads for consideration by energy service providers.
115. The system of claim 28 including means for enabling an energy service provider to identify the impact upon that energy service provider's load and upon other energy service providers' loads of load shifting between that energy service provider and other energy service providers.
116. The system of claim 28 including means for enabling the division of energy service provider loads through functional division, practical division, or unit division.
117. The system of claim 28 including means for executing transactions between or among energy service providers involving of load-shifting.
118. The system of claim 28 including means for searching for potential complimentary loads based upon discrete and impact criteria.
119. The system of claim 28 including means for searching for customer loads or aggregate loads that meet exchange user-specified or exchange user-designed discrete or impact criteria.
120. The system of claim 28 including means for searching for ESP loads that meet exchange user-specified or exchange user-designed discrete or impact criteria.

121. The system of claim 28 including means to execute aggregation transactions between or among customers and/or aggregators.
122. The system of claim 28 including means to carry out energy service provider instructions, including ESP autonomous search instructions, impact disclosure instructions, optimization contract instructions, optimization trading instructions, and ESP ID instructions.
123. The system of claim 29 wherein the exchange node functionality is independent of any particular hardware configuration.
124. The system of claim 29 wherein the exchange network functionality is independent of the network architecture employed.
125. The system of claim 29 wherein the exchange network functionality is independent of the communications technology used to connect exchange nodes.
126. The system of claim 29 where the retail price search engine and the optimization price search engine make use of trade history tables.
127. The system of claim 29 where the retail price search engine and the optimization price search engine make use of discrete criteria and impact criteria.
128. The system of claim 29 including means to provide users thereof with information conveying the impact of proposed or actual transactions for the trading of electric power at retail upon an ESP load and, in transactions involving divided loads, also the impact of said transactions upon the residual load of the customer or aggregator.

129. The system of claim 29 including means to provide users thereof with information conveying the impact of aggregation transactions involving whole loads or divided loads and local loads or network loads upon customers or aggregators.
130. The system of claim 29 including means to carry out customer instructions including associated load instructions, customer autonomous search instructions, load aggregation instructions, division trading instructions, long position instructions, aggregation transaction instructions, and customer ID instructions.
131. The system of claim 29 where the means for the identification and analysis of one or more customer loads or aggregate loads utilize discrete criteria or impact criteria as the basis for searching for appropriate customer loads or aggregate loads.
132. The system of claim 29 where the means for the identification of one or more electric service provider loads by a customer utilize the discrete criteria or impact criteria used by an ESP applied to that customer's load to determine which ESP or ESPs have used discrete criteria and/or impact criteria that would be met by that customer load.
133. The system of claim 29 where that system can identify and analyze whole loads, hypothetical loads, or divided loads.
134. The system of claim 29, where the discrete or impact criteria are applied to whole loads, hypothetical loads, or divided loads.
135. The system of claim 29 where the system can identify and analyze local loads or network loads.



136. The system of claim 29 where the discrete or impact criteria are applied to local loads or network loads.
137. The system of claim 29 where that system can identify and analyze exchange trades involving whole loads, hypothetical loads, or divided loads.
138. The system of claim 29, where the discrete or impact criteria are applied to exchange trades involving whole loads, hypothetical loads, or divided loads.
139. The system of claim 29 where the system can identify and analyze exchange trades involving local loads or network loads.
140. The system of claim 29 where the discrete or impact criteria are applied to exchange trades involving local loads or network loads.
141. The system of claim 29 including means, when divided loads of customers or aggregators are searched, to apply specified impact criteria to the load of the exchange user making the search and to the portion of the divided load to be left with the customer or aggregator after the portion of the divided load that met the search criteria specified by the exchange user making the search is eliminated from the load of that customer or aggregator.
142. The system of claim 29 including means to facilitate the functional division, practical division or unit division of customer loads or aggregate loads.
143. The system of claim 29 including means to facilitate load division by incorporating the instructions of customers or aggregators with respect to how to divide their respective

loads and make information concerning such customer-defined or aggregator-defined segments available to users of the system.

144. The system of claim 29 including means to facilitate load division by offering, at the request of the customer or aggregator, suggestions for the division of the customer load an aggregate load on a functional, practical, or unit basis.
145. The system of claim 29 including means to facilitate load division by enabling electric service providers, aggregators, and customers to suggest to customers and aggregators how their loads might be segmented using functional division, practical division, or unit division.
146. The system of claim 29 including means to execute transactions involving the trading of electric power at retail where trading involves whole loads or divided loads and local loads or network loads.
147. The system of claim 29 including means to execute transactions involving long position trading.
148. The system of claim 29 including means to execute transactions involving the trading of electric power at retail with customers or aggregators that consume energy at one site or a plurality of sites.
149. The system of claim 29 including means to address the ESP matching problem, the customer load efficiency problem, the multiple site problem, and the price information problem.

150. The system of claim 29 including means for calling to the attention of energy service providers those customer loads which, if added to the energy service provider's load, would increase the efficiency thereof.
151. The system of claim 29 including means for enabling customers or aggregators to offer hypothetical loads for consideration by energy service providers.
152. The system of claim 29 including means for enabling an energy service provider to identify the impact upon that energy service provider's load and upon other energy service providers' loads of load shifting between that energy service provider and other energy service providers.
153. The system of claim 29 including means for enabling the division of energy service provider loads through functional division, practical division, or unit division.
154. The system of claim 29 including means for executing transactions between or among energy service providers involving load-shifting.
155. The system of claim 29 including means for searching for potential complimentary loads based upon discrete and impact criteria.
156. The system of claim 30 including means for searching for customer loads or aggregate loads that meet exchange user-specified or exchange user-designed discrete or impact criteria.
157. The system of claim 29 including means for searching ESP loads that meet exchange user-specified or exchange user-designed discrete or impact criteria.

158. The system of claim 29 including means for enabling exchange users to search for information relating to retail trades, including price and trade terms.
159. The system of claim 29 including means for enabling electric service providers to search for information relating to optimization trades including the price and trade terms of said transactions.
160. The system of claim 29 including means to execute aggregation transactions between or among customers and/or aggregators.
161. The system of claim 29 including means to carry out energy service provider instructions, including ESP autonomous search instructions, impact disclosure instructions, optimization contract instructions, optimization trading instructions, and ESP ID instructions.
162. A system for analyzing and arranging transactions between one or more energy service providers and one or more potential customers, said system comprising means for identifying and analyzing one or more customer loads or aggregate loads, said identifying and analyzing means including means for utilizing discrete criteria and impact criteria as the basis for searching for customer or aggregate loads that are most appropriate considering the existing supply obligations of the energy service providers.
163. The system of claim 162, in which said load analyzing means includes means for analyzing whole loads, divided loads, and hypothetical loads.
164. The system of claim 162, in which said load analyzing means includes means for identifying and analyzing local loads and network loads.

165. The system of claim 162, further comprising means, effective during a search of divided loads, to apply specified impact criteria to the load of exchange user making the search and to the portion of the divided load to be left with the potential customer or aggregator after the portion of the load that met the search criteria specified by the searching exchange user is removed from the load of the potential customer or aggregator.
166. The system of claim 162, further comprising means for providing long position information relative to the sale of electric power by a customer or aggregator to an energy provider.
167. A system for analyzing and arranging transactions between energy service providers and one or more potential customers, said system comprising means for one of said customers to apply the discrete criteria and impact criteria used by said one or more energy service providers to the load of said one of said customers, and means for determining which one or more of said energy service providers utilizes discrete criteria and impact criteria that would be met by the load of said one of said customers.
168. The system of claim 167, in which the discrete criteria and impact criteria are applied to one or more whole loads, divided loads, or hypothetical loads.
169. The system of claim 167, in which the discrete criteria and impact criteria are applied to local loads or to network loads.
170. The system of claim 167 further comprising means effective when one or more divided loads are subjected to the search criteria of one or more of said energy service providers to apply specified impact criteria to the portion of the divided load to be left with said one

of said customers or aggregators, after the portion of the divided load that met the energy service provider's specified search criteria is removed from the whole load of the customer or aggregator.

171. A system for analyzing and arranging load shifting transactions between energy service providers, said system comprising means for energy service providers to use discrete criteria and impact criteria as a basis for searching for energy service providers with electric power supply obligations that are most appropriate for load-shifting transactions with the energy service provider making the search.
172. The system of claim 171 in which the discrete criteria and impact criteria are applied to divided loads.
173. The system of claim 171 in which the discrete criteria and impact criteria are applied to local loads and network loads.
174. A system for analyzing and arranging aggregation transactions between are among one or more customers and/or one or more aggregators, said system comprising means for said customers and/or said aggregators to use discrete criteria and impact criteria as a basis for searching under loads are more appropriate for aggregation transactions.
175. The system of claim 174 in which discrete criteria and impact criteria are applied to whole loads, divided loads, and hypothetical loads.
176. The system of claim 174 in which the discrete criteria and impact criteria are applied to local loads and network loads.

177. A system for the identification and analysis of one or more customer loads and/or aggregate loads, said system comprising a retail load search engine that utilizes discrete criteria and/or impact criteria as the basis for searching for appropriate customer loads or aggregate loads.
178. The system of claim 177 further comprising means for the identification of one or more ESP loads by a customer that utilizes the discrete criteria and/or impact criteria used by an ESP applied to that customer's load to determine which ESP or ESPs have utilized discrete criteria and/or impact criteria that would be met by that customer load.
179. The system of claim 177 where that system can identify and analyze not only whole loads, but also hypothetical loads and/or divided loads.
180. The system of claim 177 further comprising means, when divided loads are searched, to apply specified impact criteria not only to the load of the exchange user making the search, but also to the portion the divided load to be left with the customer or aggregator (after the portion of the divided load that met the search criteria specified by the exchange user making the search is eliminated from the whole load of that customer or aggregator).
181. The system of claim 177 further comprising means to operate in both custom search mode and autonomous load search mode.
182. A system comprising a retail trading engine that facilitates the functional division and/or practical division and/or unit division of customer loads or aggregate loads for the purposes of enabling the trading of electric power at retail to satisfy divided loads.

183. The system of claim 182 further comprising means to facilitate load division by incorporating the instructions of customers and/or aggregators with respect to how to divide their respective loads and making information concerning such customer-defined and/or aggregator-defined load segments available to users of the system.
184. The system of claim 182 further comprising means to facilitate load division by offering, at the request of the customer or aggregator, suggestions for the division of the customer load an aggregate load on a functional, practical, or unit basis.
185. The system of claim 182 further comprising means to facilitate load division by enabling ESPs, aggregators, and customers to suggest to customers and aggregators how their loads might be segmented using functional division, practical division, or unit division and for adoption or modification of those suggestions by users of the system.
186. The system of claim 182 further comprising means to execute aggregation transactions.
187. The system of claim 182 further comprising means to execute transactions involving long position trading.
188. The system of claim 182 further comprising means to execute transactions involving the trading of electric power at retail with respect to the loads of customers or aggregators that consume energy at one or a plurality of sites.
189. The system of claim 182 further comprising means to facilitate transactions involving the trading of electric power at retail through a customer subscription manager and/or a contracts administration manager (customer) and/or a message handler.



190. The system of claim 182 further comprising means to provide users thereof with information conveying the impact of proposed and/or actual transactions involving the trading of electric power at retail upon an ESP load or, in the case of transactions involving divided loads, also the impact upon the residual load of the customer or aggregator.
191. The system of claim 182 further comprising means to provide users thereof with information conveying the impact of aggregation-transactions upon customers, and/or aggregators whether those transactions involve whole loads or divided loads.
192. The system of claim 182 further comprising means to, in connection with the facilitation of transactions involving the trading of electricity at retail or transactions involving aggregation, carry out customer instructions including, but not limited to, associated load instructions customer autonomous search instructions and/or division trading instructions and/or long position instructions and/or aggregation transaction instructions and/or customer ID instructions.
193. The system claim 182 further comprising means in connection with retail trading, to subject loads to load division using either or both of static load division or dynamic load division as appropriate.
194. A system for the identification and analysis of retail trades comprising a retail price search engine that utilizes trade industry tables and/or discrete criteria and/or impact criteria as the basis for searching for appropriate retail trades.

195. The system of claim 194 further comprising means to search for retail trades involving whole loads, and/or divided loads and/or hypothetical loads.
196. The system of claim 194 further comprising means to operate in custom price search mode or autonomous price search mode.
197. A system for the identification and analyses of one or more ESP loads, said system comprising an optimization load search engine that utilizes discrete criteria and/or impact criteria on the basis for searching for appropriate ESP loads.
198. The system of claim 197 further comprising means to identify and analyze not only whole loads, but also divided loads.
199. The system of claim 197 further comprising means to apply impact criteria not only to the load of the ESP making the search, but also to the ESP loads being searched.
200. The system of claim 197 further comprising means to operate in custom load search mode and autonomous load search mode.
201. A system comprising an optimization trading engine that facilitates the functional division, practical division, and unit division of ESP loads for the purpose of enabling load-shifting transactions between ESPs.
202. The system of claim 201 further comprising means to facilitate the division of ESP loads by incorporating the instructions of ESPs with respect to how to divide their loads and making information concerning ESP-defined load segments available to users of the system.

203. The system of claim 201 further comprising means to facilitate the division of ESP loads by offering, at the request of the ESP, suggestions for load division and for the adoption or modification of these suggestions by ESPs.
204. The system of claim 201 further comprising means to facilitate optimization trading by providing ESPs with information conveying the impact of proposed optimization trades on the ESPs concerned where the ESPs indicate their willingness to share that information.
205. The system of claim 201 further comprising means to facilitate optimization trading (between ESPs) through an ESP subscription manager and/or a contracts administration manager (ESPs) and/or a message handler.
206. The system of claim 201 further comprising means to, in connection with optimization trading (between ESPs), carry out ESP instructions, including ESP autonomous search instructions optimization trading instructions, impact disclosure instructions, optimization contract instructions, and ESP ID instructions.
207. The system of claim 201 further comprising means in connection with optimization trading, to subject loads to load division using either or both of static load division or dynamic load division as appropriate.
208. The system of claim 201 further comprising means to execute optimization transactions.
209. A system for the identification and analysis of optimization trades (between ESPs) comprising an optimization price search engine that utilizes discrete criteria and/or impact criteria as the basis for searching for appropriate optimization trades.

210. The system of claim 209 further comprising means to search for optimization trades involving whole load and/or divided loads.
211. The system of claim 209 further comprising means to operate in custom price search mode and autonomous price search mode.
212. An exchange network comprised of exchange nodes, each of which includes a retail load search engine, that enables all of the functions of a single retail load search engine to be performed not only with respect to local loads, but also with respect to network loads.
213. An exchange network comprised of exchange nodes, each of which includes a retail trading engine, that enables all of functions of a single retail trading engine to be performed not only with respect to local loads, but also with respect to network loads.
214. An exchange network comprised of exchange nodes, each of which includes a retail price search engine, that enables all of the functions of a single retail price search engine to be performed not only with respect to local loads, but also with respect to network loads.
215. An exchange network comprised of exchange nodes, each of which includes an optimization load search engine, that enables all of the functions of a single optimization price search engine to be performed not only with respect to local loads, but also with respect to network loads.
216. An exchange network comprised of exchange nodes, each of which includes an optimization trading engine, that enables all of the functions of a single optimization trading engine to be performed only with respect to local loads, but also with respect to network loads.

217. An exchange network comprised of exchange nodes, each of which includes an optimization price search engine, that enables all of the functions of a single optimization price search engine to be performed with respect not only to local loads, but also to network loads.
218. A system comprising a database structure utilized to facilitate retail load searches, retail trading, aggregation transactions, long position trading, retail price searches, optimization load searches, optimization trading, and optimization price searches.
219. The system of claim 218 further comprising means to operate with whole loads, divided loads and hypothetical loads.
220. The system of claim 218 further comprising means to operate with both local loads and divided loads.
221. The system of claim 218 further comprising means to operate with multiple loads of customers, aggregators, and ESP so as to enable load searches, trading, and price searches with respect to such multiple loads whether or not such multiple loads are local loads or network loads.
222. The system of claim 218 further comprising means to support retail load searches, retail trading, aggregation, long position trading and retail price searches for customers and/or aggregators with one or a plurality of loads, for customers and/or aggregators, whether or not such customers' or aggregators' loads are registered with the same exchange node, by means of instructions provided by customers and/or aggregators (associated load instructions, customer autonomous search instructions, division trading instructions, load

aggregation instructions, long position instructions, trading contract instructions, customer ID instructions) and/or by means of a database structure that includes an association ID and a multiple load flag.

223. The system of claim 218 further comprising means to support optimization load searches, optimization trading, and optimization price searches for ESPs with one or a plurality of loads, whether or not such ESP loads are registered with the same exchange node by means of instructions provided by ESPs (impact disclosure instructions, optimization contract instructions, ESP autonomous search instructions, optimization trading instructions, and ESP ID instructions).
224. The system of claim 218 further comprising means for storing and utilizing customer and/or aggregator load information, including load identification information, customer load characteristic information, interval load data, and normalized load data.
225. The system of claim 218 further comprising means for storing and utilizing ESP load information, including load identification information, load characteristic information, and interval load data, normalized load data, and available capacity data.
226. The system of claim 218 further comprising means for storing and utilizing exchange trade information by means of trade history tables, including trade and pricing information and/or load characteristic information and/or load impact values.
227. The system of claim 218 further comprising means for storing and utilizing instructions of customers and/or aggregators necessary or appropriate to the operation of an exchange node or exchange network, including customer aggregation transaction instructions,

- associated load instructions, division trading instructions, load aggregation instructions, long position instructions, trading contract instructions, and customer ID instructions.
228. The system of claim 218 further comprising means for storing and utilizing instructions of ESPs necessary or appropriate to the operation of an exchange node or exchange network, including ESP autonomous search instructions, impact disclosure instructions, optimization contract instructions, optimization trading instructions, and ESP ID instructions.
229. A system of exchange nodes that can operate in an exchange network whether those nodes are or are not associated with a particular geography on an exclusive basis.
230. A system comprising a search engine able to search a database of electric loads.
231. The system of claim 230 further comprising means to search a database of electric loads utilizing discrete criteria and/or impact criteria.
232. A system comprising a search engine able to search a database of commodity consumption loads.
233. The system of claim 232 further comprising means to search a database of commodity consumption loads based upon discrete and/or impact criteria.
234. A system comprising a search engine able to search a database of retail electric supply transactions.
235. The system of claim 234 further comprising means to search a database of retail electric supply transactions utilizing discrete and/or impact criteria.

236. A system comprising a search engine able to search a database of commodity supply transactions.
237. The system of claim 236 further comprising means to search a database of commodity supply transactions utilizing discrete and impact criteria.
238. A system comprising a search engine able to search a database of optimization transactions.
239. The system of claim 238 further comprising means to search a database of optimization transactions utilizing discrete and impact criteria.
240. A system that comprises a search engine that utilizes discrete criteria (including identification criteria and load characteristic criteria) to search energy loads or energy transactions.
241. A system that comprises a search engine that utilizes impact criteria to search energy loads or energy transactions.
242. A system that utilizes normalized data to make the process of carrying out load searches more efficient.
243. A system that utilizes normalized data to make the process of carrying out price searches more efficient.
244. A system that uses one or more of maximum interval demand, maximum demand, total daily usage, intervals per hour, and load duration values to make load searches more effective.



245. A system that uses one or more of customer ID, load ID, service area, SIC Codes, service types, and time period of search (all, load identification criteria) and/or one or more of minimum load factor, maximum hourly demand range, average hourly demand range, maximum interval demand range, minimum load duration values, maximum load factor and power factor (all, load characteristic criteria), and/or one or more of maximum hourly demand, maximum load factor decrease, maximum load duration decrease, amount available capacity can be exceeded, minimum integral multiple factor increase, maximum integral multiple factor decrease, and minimum units received (all, impact criteria) to make load searches more effective.
246. A system that uses one or more of date of exchange trade, time period of search, prices and charges for various standard energy billing quantities, trading terms, unit size, customer instructions, customer interval load data, ESP interval load data before and after the exchange trade, ESP capacity information interval data, and method of load shifting to be applied (all, trade and pricing information) and/or one or more of maximum hourly demand, average hourly demand, maximum interval demand, and load duration values (all, load characteristic information) and/or one or more of load factor before and after, integral multiple factor before and after, maximum demand with date/time before and after, load duration values before and after, unit division statistics (all, load impact values) to make price searches more effective.
247. A system that uses one or more of customer ID, load ID, service area or territory, SIC code, service types, and time period of search (all, load identification criteria) and/or one or more of minimum load factor, maximum hourly demand range, average hourly

demand range, maximum interval demand range, minimum load duration values, maximum load factor (all, load characteristic information) and/or one or more of minimum load factor increase, minimum integral multiple factor increase, minimum load duration values increase, maximum load factor decrease, maximum integral multiple factor decrease, maximum load duration values decrease, and minimum units received (all, impact criteria) to make price searches more effective.

248. A system comprising:

- (a) means to analyze the electric usage of one or more customers and of the electricity supply obligations of one or more energy service providers;
- (b) means to determine the impact in terms of various measures of the efficiency of usage of electric power of potential transactions involving the retail supply of electric power, the aggregation of two or more customer electric loads, or the shifting of electricity supply obligations between or among two or more energy service providers;
- (c) means to provide access to, search for, and analyze of historical transactions involving the retail supply of electric power or the shifting of electricity supply obligations between or among two or more energy service provides; and
- (d) means to arrange and execute transactions involving the retail supply of electric power, the aggregation of the electric loads of two or more customers, or shifting electricity supply obligations between or among two or more energy service providers,

said system comprising a retail electric power exchange/energy service provider load optimization exchange and, where a plurality of such exchanges are to be employed, a network of such exchanges, said exchanges each comprising:

(a) search engines that search and analyze the potential transactions and historical transactions; and

(b) trading engines to execute actual transactions, wherein said exchange includes: incorporating:

associated database servers and communication links to tie exchange users to exchanges, exchanges to associated database services, and, where a network is involved, exchanges to exchanges.

249. A method for arranging identifying and analyzing potential transactions for the sale and purchase of electric power between one or more potential energy service providers with one or more potential customers, said method comprising the steps of: providing data communication among said potential energy service providers and said potential customers, analyzing the usage of electric power by one or more of said customers (load), and determining the effect on one or more of said energy service providers of operatively combining one or more potential customer loads with the electric power supply obligations of one or more of said energy service providers.

250. The method of claim 249 further comprising the steps of establishing search criteria, said criteria comprising discrete criteria or impact criteria.

251. The method of claim 250 further comprising the steps of applying discrete criteria to determine which loads of said potential customers meet said discrete criteria and testing

combinations of potential customer loads with the electric power supply obligations of said energy service providers to determine whether those impact criteria are satisfied.

252. A method for arranging transactions for the sale and purchase of electric power between one or more potential energy service providers with one or more potential customers, said method comprising the steps of: providing data communication among said potential providers and said customers, analyzing the usage of electric power by one or more of said customers (loads), and determining the effect on one or more of said energy service providers of operatively combining one or more potential customer loads with the electric power supply obligations for electric power of one or more of said energy service providers.
253. The method of claim 252 further comprising the step of establishing search criteria of one or both of two types: discrete criteria and impact criteria.
254. The method of claim 253 further comprising the steps of applying discrete criteria to determine which loads of said potential customers meet those discrete criteria and testing combinations of potential customer loads with the electric power supply obligations of said energy service providers to determine whether those impact criteria are satisfied.
255. A method for identifying and analyzing potential transactions involving shifting electric power supply obligations (loads) between energy service providers, said method comprising the steps of: providing data communications means between said energy service providers, analyzing said supply obligations of said energy service providers, and determining the effect on said energy providers of shifting supply obligations between them.

256. The method of claim 255 further comprising the step of establishing search criteria, said criteria comprising discrete criteria or impact criteria.
257. The method of claim 256 further comprising the steps of applying those discrete criteria to loads of energy service providers and applying those impact criteria to potential shifts in such loads between said energy service providers to determine which energy service providers and their loads satisfy those discrete criteria and which load shifts with such energy service providers satisfy those impact criteria.
258. A method for arranging load-shifting transactions between energy service providers, said method comprising the steps of: providing data communications between said energy service providers, analyzing the supply obligations of said energy service providers, and arranging load-shifting transactions between selected ones of said energy service providers based on the information obtained in said analyzing step.
259. The method of claim 258 further comprising the step of establishing search criteria, said search criteria comprising discrete criteria or impact criteria.
260. The method of claim 259 further comprising the steps of applying those discrete criteria to loads of energy service providers and applying those impact criteria to potential shifts in such loads between said energy service providers to determine which energy service providers and their loads satisfy those discrete criteria and which load shifts with such energy service providers satisfy those impact criteria.
261. A method for identifying and analyzing potential transactions for the aggregation of the electric loads of one or more customers and/or one or more aggregators, said method

comprising the steps of providing data communications among said customers and/or aggregators, analyzing the usage of electric power by one or more of said customers and/or by one or more of said aggregators (loads), and determining the effect on one or more of said customers and/or one or more of said aggregators of combining two or more of the loads of said customers and/or aggregators.

262. The method of claim 261 further comprising the steps of establishing search criteria, said search criteria comprising discrete criteria or impact criteria.
263. The method of claim 262 further comprising the steps of applying those discrete criteria to determine which loads of said customers and/or aggregators meet those discrete criteria and testing the combination of those customer loads and/or aggregate loads to determine whether those combinations satisfy the impact criteria.
264. A method for arranging for the aggregation of the electric loads of one or more customers and/or one or more aggregators, said method comprising the steps of providing data communications among said customers and/or aggregators, analyzing the usage of electric power by one or more said customers and/or by one or more of said aggregators, determining the effect on one or more of said customers and/or one or more of said aggregators of combining two or more of the loads of said customers and/or aggregators, and arranging for the aggregation of the loads of one or more customers and/or one or more aggregators.
265. The method of claim 264 further comprising the steps of establishing search criteria, said criteria comprising discrete or impact criteria.

266. The method of claim 265 further comprising the steps of applying discrete criteria to determine which loads of said customers and/or aggregators meet those discrete criteria and testing the combination of those customer loads and/or aggregate loads to determine whether these combinations satisfy those impact criteria.
267. A method of identifying and analyzing historical transactions for the sale and purchase of electric power between one or more customers of said power and one or more energy service providers, said method comprising the steps of:
- (a) providing data communication for said energy service providers and said customers;
  - (b) analyzing the customer loads involved in said historical transactions; and
  - (c) determining the effect on the energy service provider involved in one of said historical transactions of combining the load of the customer involved in said one of said transactions with the electric power supply obligations (loads) of the energy service provider involved in said one of said transactions.
268. The method of claim 267 further comprising the steps of establishing search criteria, said search criteria comprising discrete criteria or impact criteria.
269. The method of claim 268 further comprising the steps of applying those discrete criteria to determine which historical transactions involved customer loads that meet those discrete criteria and testing which historical transactions involve the combination of a customer load with the electric power supply obligations of an energy service provider that satisfies those impact criteria.

270. A method for identifying and analyzing historical transactions involving the shifting of electric power supply obligations (loads) between energy service providers, said method comprising the steps of:
- (a) providing data communication between said energy service providers;
  - (b) analyzing the supply obligations of said energy service providers involved in said historical transactions; and
  - (c) determining the effect of said historical transactions involving the shifting of supply obligations on the supply obligations of the energy service providers involved in said historical transactions.
271. The method of claim 270 further comprising the steps of establishing search criteria of one or both of two types: discrete criteria and impact criteria.
272. The method of claim 271 further comprising the steps of applying those discrete criteria to determine which historical transactions involve energy service provider loads that meet those discrete criteria and testing which historical transactions involve load shifting between energy service providers that satisfies those impact criteria.
273. A method for identifying and analyzing potential transactions for the sale and purchase of electric power and/or the shifting of electric power supply obligations between or among
- (i) one or more potential energy service providers, (ii) one or more energy service providers to which or from which load may be shifted, and (iii) one or more potential customers, said method comprising the steps of:



- (a) providing data communication among said potential energy service providers, said other energy service providers to which or from which load may be shifted, and said potential customers;
- (b) analyzing the electric power supply obligations of one or more of said energy service providers and one or more of said other energy service providers to which or from which load may be shifted;
- (c) analyzing the usage of electric power by one or more of said customers; and
- (d) determining the effect on one or more of said energy service providers and on one or more of said other energy service providers to whom or from which load may be shifted of shifting supply obligations between or among said energy service providers and of combining one or more potential customer usages of electric power (loads) with the electric power supply obligations of one or more of said energy service providers.

274. A method for arranging transactions for the sale and purchase of electric power and/or the shifting of electric power supply obligations between or among (i) one or more potential energy service providers, (ii) one or more energy service providers to which or from which a load may be shifted, and (iii) one or more potential customers, said method comprising the steps of:

- (a) providing data communication among said potential energy service providers, said other energy service providers to which or from which load may be shifted, and said potential customers;

- (b) analyzing the electric power supply obligations of one or more of said energy service providers and of one or more of said other energy service providers to which or from which load may be shifted;
- (c) analyzing the usage of electric power by one or more of said customers;
- (d) determining the effect on one or more of said energy service providers and on one or more of said other of said energy providers to which or from which load may be shifted of shifting supply obligations between or among said energy service providers and of combining one or more potential customer usages of electric power (loads) with the electric power supply obligations of one or more of said energy service providers;
- (e) arranging load-shifting transactions between one or more of said energy service providers and one or more of said other energy service providers to which or from which load may be shifted; and
- (f) arranging transactions involving the purchase and sale of electric power between one or more of said energy service providers and one or more of said potential customers.

275. A method of identifying and analyzing historical transactions involving the shifting of electric power between or among energy service providers and/or the sale and purchase of electric power between or among one or more energy service providers and one or more customers for said power, said method comprising the steps of:

- (a) providing data communication between or among said energy service providers and said one or more of said customers;
- (b) analyzing the supply obligations of the ones of energy service providers involved in the historical transactions;
- (c) analyzing the customer loads involved in the historical transactions;
- (d) determining the effect of the historical transactions involving the shifting of supply obligations on the energy providers involved in the historical transactions; and
- (e) determining the effect on the energy service providers involved in the historical transactions of the combining of the electric loads of the customers involved in those transactions with the electric power obligations of the energy service providers involved in those transactions.

276. A method for searching and analyzing the electric loads of customers and their potential for combination with the existing electric power supply obligations of the energy service provider making the search said method comprising the steps of:

- (a) establishing search criteria of two types, discrete criteria and impact criteria;
- (b) applying those discrete criteria to determine which customer loads meet those discrete criteria; and

- (c) testing the combination of the customer loads with the electric power supply obligations of the energy service provider to determine whether the effect of such combinations meets those impact criteria.
277. The method of claim 276 where the application and testing steps apply to whole loads, divided loads, and hypothetical loads.
278. The method of claim 277 comprising the further step, during the search of divided customer loads, of applying specified impact criteria to the portion of the customer load to be retained by the customer after the portion of the customer load that met the specified search criteria is removed from the customer load.
279. A method for searching and analyzing the electric power supply obligations of energy service providers loads to determine the potential for the combination of a particular customer load with one or more of said energy service provider loads, said method comprising the steps of:
- (a) determining the discrete criteria or impact criteria used by each of the energy service providers;
  - (b) applying the discrete criteria used by each of the energy service providers to the particular customer load to determine which energy service providers have used discrete criteria that are met by that customer load; and
  - (c) testing the combination of the particular customer load with each energy service provider load to determine which of such combinations satisfies the impact criteria of the energy service provider involved in the combination.

280. The method of claim 279 where the application and testing steps apply to whole loads, divided loads, and hypothetical loads.
281. The method of claim 280 comprising the further step, where the particular customer load is a divided load, of applying specified impact criteria to the portion of the customer load to be retained by the customer after the portion of the customer load that met the search criteria used by the energy service provider is removed from the customer load.
282. A method for searching and analyzing energy service provider loads to determine the potential for load shifting transactions between a particular energy service provider and other energy service providers said method comprising the step of:
- (a) establishing search criteria, said criteria comprising discrete criteria or impact criteria;
  - (b) applying those discrete criteria to determine which energy service provider loads meet those discrete criteria; and
  - (c) applying those impact criteria to potential shifts in electric power supply obligations between energy service providers to determine which energy service providers and their energy service provider loads and which load shifts with such energy service providers satisfy those impact criteria.
283. A method for searching and analyzing the electric loads of customers and their potential for combination with customer loads of the customer making the search, said method comprising the steps of:

- (a) establishing search criteria, said search criteria comprising discrete criteria or impact criteria;
  - (b) applying those discrete criteria to customer and/or aggregator loads to determine which loads meet the discrete criteria; and
  - (c) applying those impact criteria to combinations of customer and/or aggregator loads with the load of the customer making the search to determine which combinations satisfy those impact criteria.
284. The method of claim 283 where the application steps apply to whole loads, divided loads, and hypothetical loads.
285. The methods of claim 284 comprising of the further steps, during the search of divided loads, of applying specified impact criteria to the portion of the customer load to be retained by the customer after the portion of the customer load that met the specified search criteria is removed from the customer load.
286. A method of searching and analyzing retail trades, said method comprising:
- (a) establishing search criteria, said criteria comprising discrete criteria or impact criteria.
  - (b) applying those discrete criteria to the customer loads involved in the retail trades to determine whether they meet the discrete criteria; and

- (c) applying those impact criteria to the impact of the retail trades on the energy service provider and its energy service provider load involved in the retail trades to determine whether those impact criteria are met.
287. The method of claim 286 where the application steps are applied to whole loads, divided loads, and hypothetical loads.
288. A method of searching and analyzing optimization trades, said method comprising the steps of:
- (a) establishing search criteria, said search criteria comprising, discrete criteria and impact criteria.
  - (b) applying those discrete criteria to the energy service provider loads involved in the retail trades to determine whether they meet the discrete criteria; and
  - (c) applying those impact criteria to the impact of the optimization trades on the energy service providers and their energy service provider loads involved in the optimization trades to determine whether those impact criteria are met.

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